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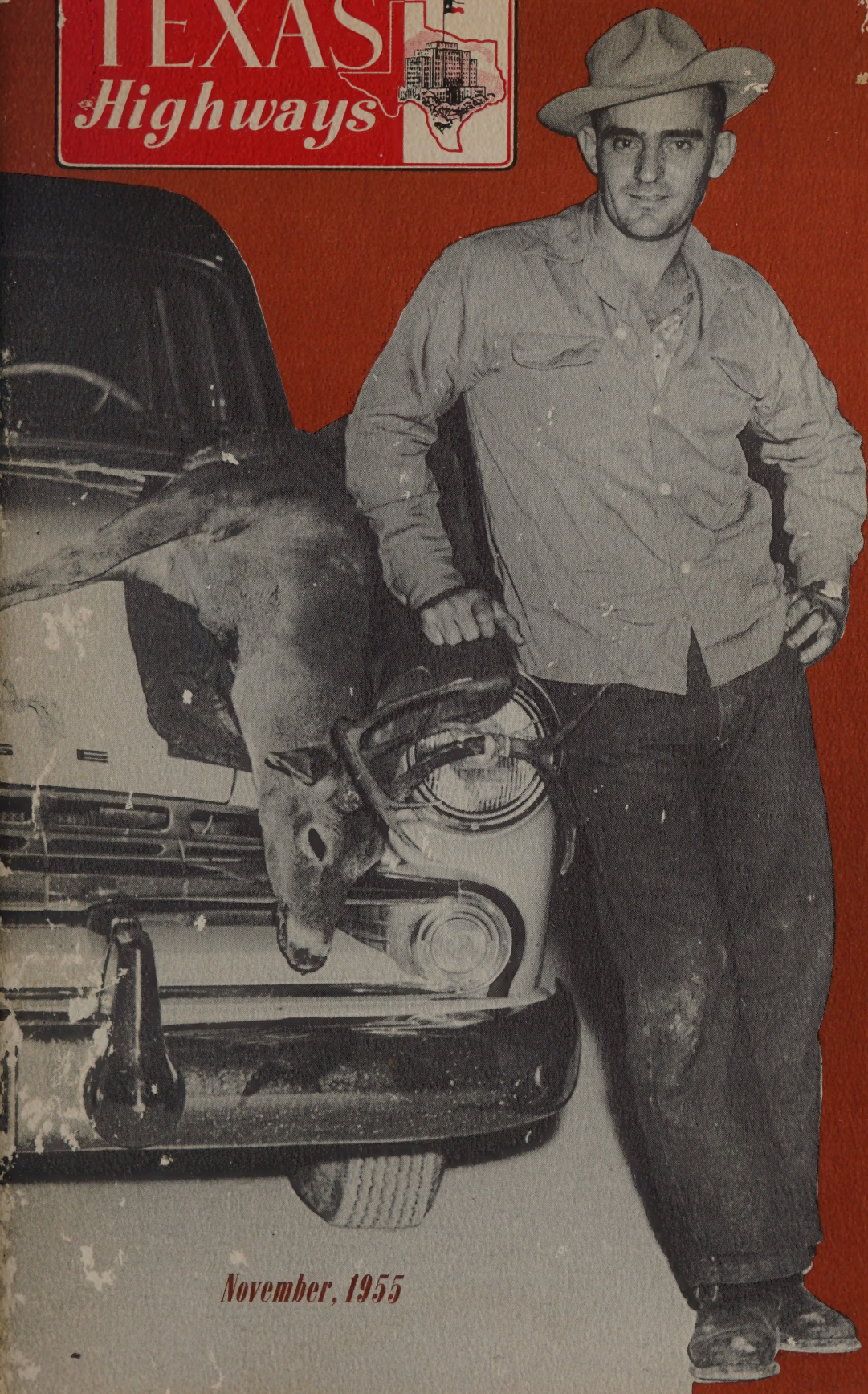
# TEXAS Highways



November, 1955

# What's in a Name?

Just off U.S. 81 about thirteen miles southwest of Austin is a town called Buda. Unless you have heard the story behind the name of Buda, it would be a fairly safe bet that you can't tell its origin. Established in 1880 as a depot for the International Great Northern Railroad, the settlement was first called Dupre. But in 1889 the Post Office Department asked that the name be changed. At that time a large part of the population was made up of widows, so one of the local wags, who probably knew the anglicized version of several Spanish words, gave the town its name which is a corruption of "viuda," the Spanish word for widow. Buda now boasts a population of 483 (the number of widows is not listed).

# About the Cover . . .

Along about this time every year there is one line of thought, one topic of conversation that takes precedence over everything else — deer hunting. Texas' highways always play a big role in this annual preoccupation. This year, as always, they will be jammed with carloads of hunters of all ages converging on the deer country to fulfill what some psychologists have called man's old stone age urge to provide his family's meat with his own hands — with a few added conveniences such as automobiles, shotguns, and freezers. Not everyone who sallies forth in search of a buck will be as fortunate as the hunter on our cover. Many of these modern day nimrods will as usual make a sport of blasting away at highway signs and other favorite stationary targets. When the season closes the hunting fever will have taken its toll in deer, human life and highway signs. And next year there will be a few more hunters join the veterans in stalking game.

VOL. III

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TEXAS Highways

*The purpose of this publication, "Texas Highways," is to furnish a medium for presenting practical ideas and information. Employees are invited and urged to submit suggestions and relate experiences which would benefit or be of interest to Highway employees. These conclusions and data are not necessarily endorsed by the Highway Department nor are they to be construed as instructions.*

*Photographic services are available and other assistance may be obtained, if desired, in preparing material for submission. All material and comments should be directed to the Information and Statistics Division, Austin 14, Texas.*

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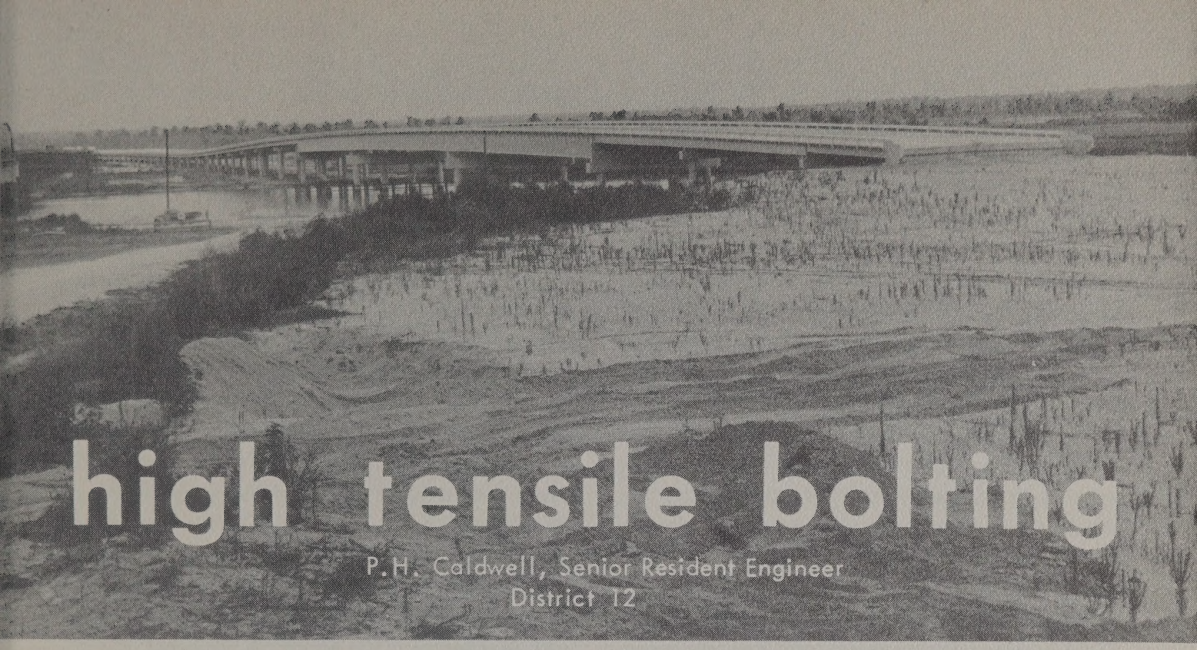
**COMPILED AND EDITED**
**Information and Statistics Division**

# DO YOU KNOW TEXAS

This handsome edifice is one of the chain of old Spanish missions that surround modern San Antonio. Said to be the best preserved of all the mission buildings, this mission was moved three times before the present building was erected on the San Antonio River.

Nuestra Senora de la Purisima Concepcion de los Hainai was the second mission established by the Domingo Ramon expedition, and was located in 1716 near Mill Creek approximately six miles south of present Douglass in Nacogdoches County. Abandoned in 1719 because of the French invasion of Texas and re-established in 1721, it was the only mission in the area not completely ruined during the three years of abandonment. In 1730 it was moved to the Colorado River in the vicinity of the present Zilker Park in Austin as were the missions San Jose de los Nazonis and San Francisco de los Neches. In 1731 the three were moved again to San Antonio, where Purisima Concepcion was located on the San Antonio River and its name changed to Nuestra Senora de la Purisima Concepcion de Acuna.

Popularly called Mission Concepcion today, it and the other missions of San Antonio are built of adobe and porous gray rock called tufa. Its walls are 45 inches thick, and its dome and wide stone serrations are reminiscent of the Moorish influence in eighteenth century Spain.



# high tensile bolting

P.H. Caldwell, Senior Resident Engineer
District 12

New San Jacinto River Bridge on State 73 is one link in the expressway now under construction connecting the Houston-Port Arthur-Beaumont areas.

The main spans of the San Jacinto River Bridge, Project I 1952(15), Control 508-1-10, State Highway 73, Harris County, consist of a continuous plate girder unit with span lengths of 181 feet 3 inches, 220 feet, and 181 feet 3 inches. The basic construction of the nine-foot-deep plate girders is a 9/16-inch web with 8"x8"x3/4" and 8"x8"x1 1/8" angles. The specifications permitted the option of 7/8-inch rivets or 7/8-inch high-tensile steel bolts for field splices and field connections. The contractor, Austin Bridge Company of Dallas, Texas, chose the latter.

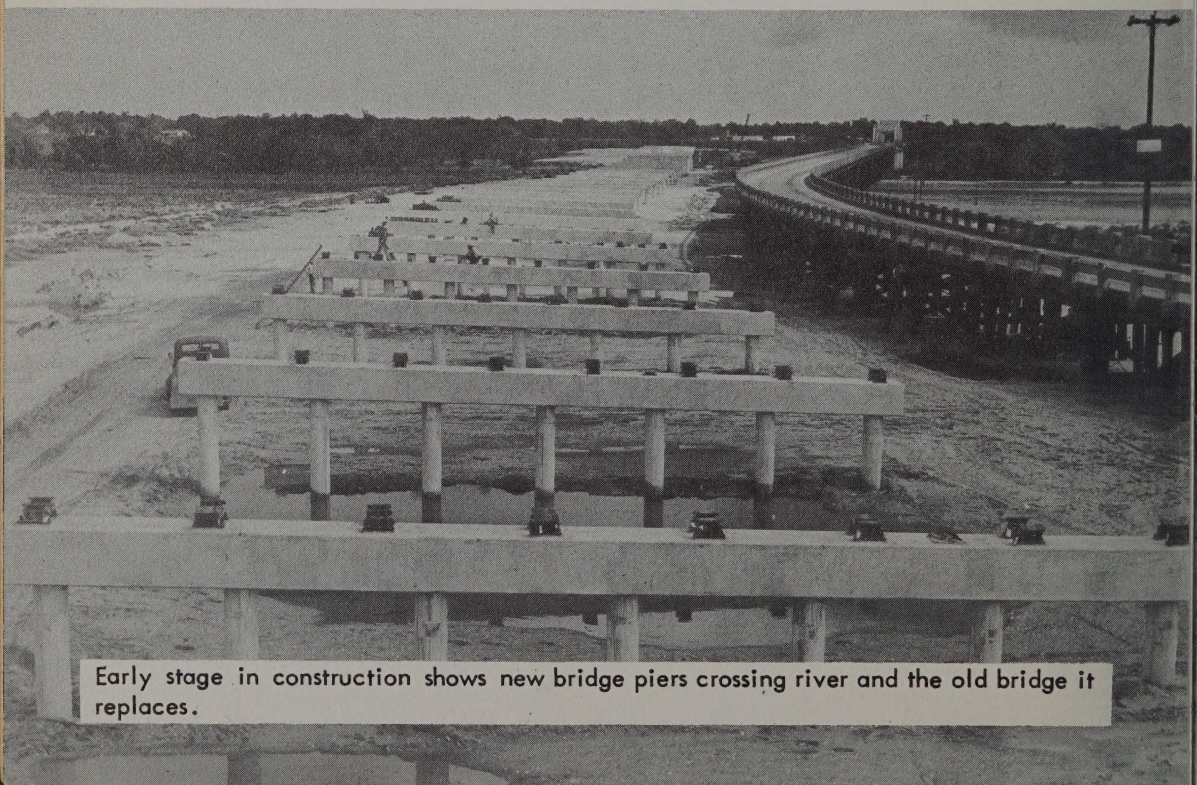
The impact wrenches used were an Ingersoll-Rand model 538 and a wrench of another manufacturer. The former wrench has a rated capacity for one to one and one-eighth-inch bolts while the latter has a rated capacity for one and one-fourth-inch bolts, according to information furnished by their respective manufacturers. However, in practice the Ingersoll-Rand wrench was able to obtain the desired tension in the bolts with swift efficiency regardless of the number of plies and thickness of steel while the other wrench required considerably longer time when used on the heavy multiple-ply joints. For this reason, the latter wrench was used principally for the two-ply joints of the diagonal bracing, which are lighter steel shapes.

The equipment used for furnishing air to the wrenches in constant volume and controlled pressure consisted of a 210 cubic foot per minute air compressor pumping into a 50 cubic foot reserve storage tank equipped with 50 feet of two-inch lead and a discharge manifold. From this manifold, the required length of three-fourths-inch air hose ran to a Cash Acme Pressure Regulator valve, Type B for air service from 0 to 150 p.s.i. with an 80 p.s.i. spring valve. The 50 feet of three-fourths-inch hose from this regulator valve to the whip line (eight feet of one-half-inch hose) of the wrench remained constant for the duration of the job.

The Texas Highway Department furnished a manual torque wrench for checking the performance of the impact wrenches. The torque wrench was equipped with a calibrated dial for measuring foot-pounds of torque exerted in tightening or loosening a bolt.

The contractor used a calibrating device, developed by the Bethlehem Steel Company, to measure the tensile pull exerted on a bolt at any stage of tightening. This device consists of a 60-ton Jenny-Jack modified by the addition of a base, and a two-inch diameter through bolt attached to a yoke at one end of the jack. A gauge, calibrated in tons, registers the load on the jack. It was found that the torque indicated by the dial of the torque wrench while tightening the nut of a bolt placed in the calibrating device corresponded accurately with the tension registered in tons on the gauge of the jack. The tension and torque values used were those recommended in Table II of specifications for assembly of structural joints using high tensile steel bolts as approved by Research Council on Riveted and Bolted Structural Joints of the Engineering Foundation, January 1954.

After checking the manual torque wrench against the tension on the bolt as indicated on the gauge of the jack, it was necessary to calibrate the impact wrenches in co-ordination with the required air pressure to obtain the desired tension in the bolt. This was done by placing a bolt in the calibration device and running up the nut until the gauge indicated the required tension. The air pressure on the regulator valve for the first test was set at 70 p.s.i. It had been assumed that the wrench, when tightening the bolt at this air pressure, would surge rapidly at the start, and gradually decrease in speed as the bolt attained the desired tension, and stall completely when the tension for this particular air pressure had been reached. We have since learned from information furnished by Ingersoll-Rand that there are no impact wrenches on the market today that automatically shut off at a predetermined torque. However, it was found that although the wrench did not stall at any air pressure, a longer time was required to attain the required tension than when using a higher pressure. The Ingersoll-Rand wrench will strip the threads or break the bolt if applied for sufficient time at 70 p.s.i. air pressure, while the other wrench would merely batter up the bolt without appreciably turning it after a reasonably high tension had been reached. It was therefore apparent that if the



Early stage in construction shows new bridge piers crossing river and the old bridge it replaces.

wrenches had no definitely recognizable and controllable point of maximum performance at a given air pressure, then some other means of calibrating them must be found. As speed of operation is always an important factor, the air regulator valve was set at 80 p. s. i. pressure and the time recorded that was required to tighten a bolt in the calibrating device to the desired tension. Using new bolts and washers in the device for each experiment, it was found in a series of tests that ten to twelve seconds of time was required to develop the desired tension using the Ingersoll-Rand wrench and eighteen to twenty seconds with the other wrench. This was proven to be consistent and dependable by numerous repetitions. Although the consistency of time required to attain the desired tension of a bolt in the calibrating machine proved the value of time as an indicator of the tension obtained, it was found in actual practice by constant checking with the manual torque wrench that additional time had to be allowed for each additional ply in the splice and for the various thicknesses and shapes to be bolted. In practice, the time required to develop the desired tension when using the Ingersoll-Rand wrench was approximately 15 seconds on heavy two-ply joints, while it took 25 seconds when using the other wrench on thick joints, although the latter was seldom used.

It might appear from the foregoing that no positive control over the tension of the bolts was maintained in view of the many thicknesses, plies, and shapes to be bolted. However, the inspector and the wrench operators worked together very closely and for the first few days approximately 90 per cent of the bolts were checked with the manual torque wrench. The operators soon became proficient enough that they could tell when the required tension had been attained by the feel and sound of the wrench, as could the inspector merely by the sound. The necessity for checking decreased rapidly until it leveled off to spot checking about 5 per cent.

The engineering personnel kept a rather complete account of the cost of installing approximately 13, 000 bolts. These costs are as follows:

| | | |
|---|---|---|
| Marine Equipment | | |
| 1 tug | 54 hours @ $4.00 | $ 216.00 |
| 1 barge | 15 days @ $3.00 per day | 45.00 |
| Compressed Air Equipment-Complete | | |
| 135 hours @ $2.50 | | 337.50 |
| Labor | | |
| Skilled labor-450 hours @ $1.75 | | 787.50 |
| Unskilled labor-369 hours @ $1.25 | | 461.25 |
| | | $1, 847.25 |
| Cost per bolt: | $\frac{\$1,847.25}{13,000}$ = $0.142 | |

These costs do not include the cost of the bolt, which averages approximately 32 cents per bolt. Fitting-up pins and bolts were used in making the preliminary connections during erection of the structural steel on the north lane and the high-tensile bolts were used as fitting-up bolts for making the connections of the steel on the south lane. The contractor's cost accounts, although agreeing closely with those kept by the engineers, reflect a difference of approximately 4 cents per bolt in favor of using the high-tensile bolts for fitting up instead of ordinary fitting-up bolts.

It is believed that through the combined efforts of a co-operative contractor, competent and honest workmen, and a conscientious and energetic inspector, a good job has been done swiftly and efficiently without friction from any sources other than that supplied by the bolts.

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## Capsule Statistics for Busy Executives . . .

A study just released by the Personnel Division reveals that the labor turnover for the entire Department was down 2 per cent in 1954 as compared to 1953. Labor turnover shown for 1954 was 30.1 per cent while the percentage shown for 1953 was 32.1. The total number of monthly employees increased by 479 or 11.5 per cent in 1953 and by 762 or 16.5 per cent in 1954.

Figures contained in the summary also show that as of January 1, 1955, 62.4 per cent of the engineers employed by the Department graduated from college after the end of World War II, and of that number the largest group or 126 graduated in 1949, just four years after the end of the war.

A total of 1,483 monthly employees left the Department during 1954. Of this number 1,078 or 72.7 per cent were in Group A and 241 or 16.2 per cent were in Group 1. A look at the length of service of employees leaving the Department during 1954 shows that 999 or 67.4 per cent worked less than one year and 1,299 or 87.6 per cent worked less than three years.

Monthly employees leaving the Department during 1954 gave the following reasons for resignation: military service, 8.6 per cent; other employment, 20.7 per cent; retirement, 2 per cent; and all other reasons including termination of temporary employment, 68.7 per cent.

# RESEARCH TAKES TO THE HIGHWAY

If the population of Texas continues to increase at its present pace and every family insists on having two automobiles, what must be done for the highways? Today the state has more than eight million population and almost four million automobiles.

City streets are so badly congested motorists are paying almost double what they should in operating costs. Each year more than 2,000 persons die in traffic accidents.

What's the answer?

Confronted with this question the Texas Highway Commission has taken the natural turn to research. To get this objective study the Commission has asked the Texas Research League to spend a year or more delving into every phase of highway activity. Research League Board Chairman Hines H. Baker has announced the project as "a survey of Texas highway planning, construction, administration, and financing."

The Texas Research League was organized in June 1952 to undertake objective research of services and problems of the Texas government. It is chartered under the laws of Texas and is supported by private funds. It is nonpolitical and takes no part in pressuring acceptance of its reports, and only undertakes studies of agencies where requests are officially made.

The highway report is expected to be ready in time for the Fifty-fifth session of the Legislature in 1957. It will be made under the direction of Alvin H. Burger, executive director of the league, with James W. McGrew and Wendell Bedichek assisting him.

To hasten its work the Research League will make use of facts and figures now in the hands of the Highway Department. Members of the engineering staff, statisticians, and other personnel also will be used wherever necessary to finish the study.

In addition the League will use consulting services of other groups that have had experience in highway studies.

"Our hope is to come up with an objective analysis of the entire highway situation," Burger said. "We expect to go into the field and talk to interested persons. We'll make a study of the highways as they affect not only the economy and culture of the state, but their effect at the various levels of government. We will record deficiencies in the system as they appear in relation to existing facilities and use. The report will show the result to the state, cities, counties, and schools. Naturally these also must be studied in relationship to the federal program, too.

In taking on the survey request it was recognized that financing and legislation also must be studied. Proponents of the survey feel that recommendations will be made for

rewriting many of the old highway laws to conform with the modern approach.

Areas in which the survey will be made at present are only general. The major highway problem since the beginning of an organized program has been getting out of the mud. Strongest emphasis was put on the rural problem. This not only was in the farm-to-market road development, but on through highways, leading from one city or one county to another.

Since the war however, with the great urbanization and industrialization in Texas, as in most other states, the highway problem has shifted its weight from the rural to the urban facilities. This shift has been far beyond the planning of everyone who was interested in roadways only for the purpose of moving a given number of automobiles or trucks.

These changes have come about so fast that the state, with an insufficient amount of money, has been unable to meet the demands of the cities and counties for highway and street appropriations. The cities themselves found their position baffling. They employed master planners who came up with blueprints of super freeway facilities. The cities and counties voted bonds and bought rights of way at extremely high prices. In many instances the planners were criticized severely because their plans seemed to be too big.

Then came the real surprise. Long before the facilities were completed they were inadequate. Facilities that were planned to carry certain traffic loads by 1965 are today carrying almost twice that number.

The cause and effect of this were startling. The state found itself deluged with requests to build more. Cities and counties were confronted with the problem not only of rights-of-way purchase but of integrating other streets and roads with a highway program. In hopes of abating congestion they set up loops around the perimeter of the city to drain off heavy traffic that had been rushing through downtown streets. Before these loops were completed, however, traffic and annexation had brought about demands for outer loops.

The Texas Highway Department has been unable to keep abreast of its estimates of highway needs. Five years ago it announced that Texas needed $100 million a year for the next five years to modernize its highway system. Within that last five years facts have borne out that this estimate was far too low.

Within the last year the state has revised its figures upward to a total of $2.2 billion to bring its highway system up to date.

It will be the League's job as a disinterested agency to take these figures and evaluate them not only from the standpoint of the state, but of every facet. It must look at the city, county, school, and even the legislative problems. Then in face of these problems the highway needs must be evaluated in terms of possible sources of revenue.

At present no one agency has this task, which means the League through its objective study will be able to provide a report, such as other states have, that will chart a solution to the problem.

Ed. Note: The above is a condensation of an article by L.A. Wilke, Assistant General Manager of the Texas Good Roads Association, which appeared in the September 1955 issue of Texas Parade.

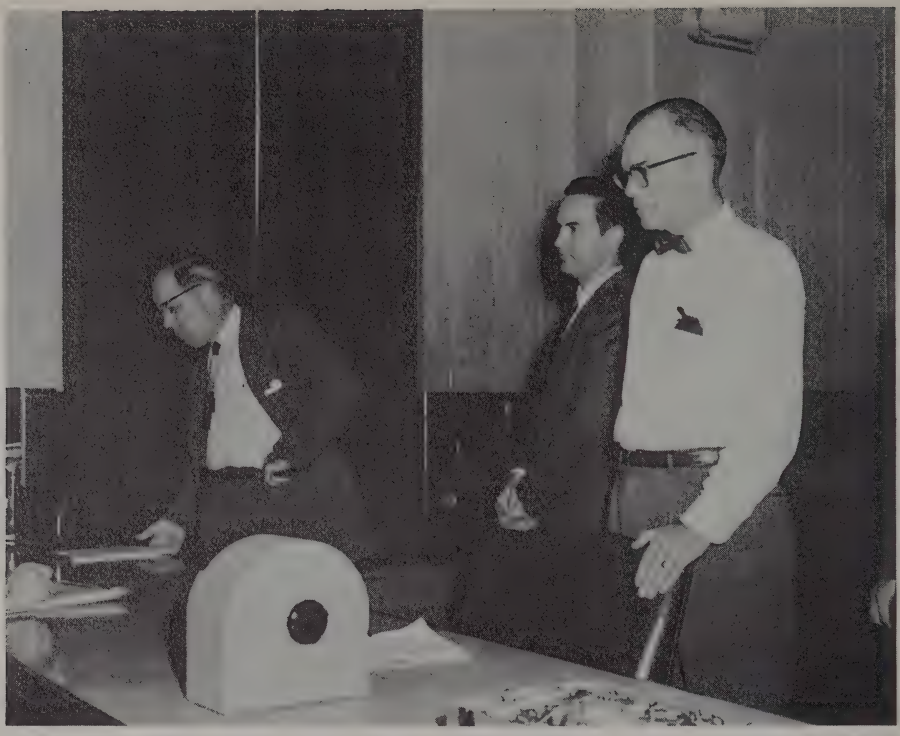
# record letting

At the October 18-19 lettings the Highway Department set a new record, with two months still to go in the year. October's letting topped by $1 million the total year's letting for any year in the history of the Highway Department. The nearest record was last year when the total amounted to $131 million. This letting made a total of $132 million put under contract thus far this year.

This record was announced by D. C. Greer, State Highway Engineer, at the opening of the October 19 proceedings, when he paid tribute to the employees who work on the projects and conduct the lettings each month. "It is difficult in the Department and its organization to single out any one section to which we should pay tribute," he said. "The entire field organization, particularly the main office section of the Road Design, Land Service Roads, Bridge, and Aid Projects Divisions have expedited this work to get it in a letting state, and to these men I particularly pay tribute."

Helping to swell this year's total are contracts let for six projects that amounted to more than $1 million each. The most recent of these was for the new high Pecos River crossing let in September for $1,396,000. Another bridge project, the Trinity River Bridge on U.S. 67 and 77 in Dallas County, was slightly over $1 million. A 4.1-mile project on the Austin Expressway, U.S. 81, was $1.5 million. The biggest job in monetary amount was a turnkey project calling for grading, structures, and surfacing on U.S. 81 and State 346 in Bexar County. This job, 6.7 miles in length, was let for $2,300,000. Another turnkey job on U.S. 80 in Dallas and Kaufman Counties was $1,994,000, and the contract for grading and structures on a 14.5-mile-long project on U.S. 81 in Bell County was let for $1,167,000.

Ed. Note: In a future issue of TEXAS HIGHWAYS a complete resume of a project from drawing board through its letting to contract is planned.



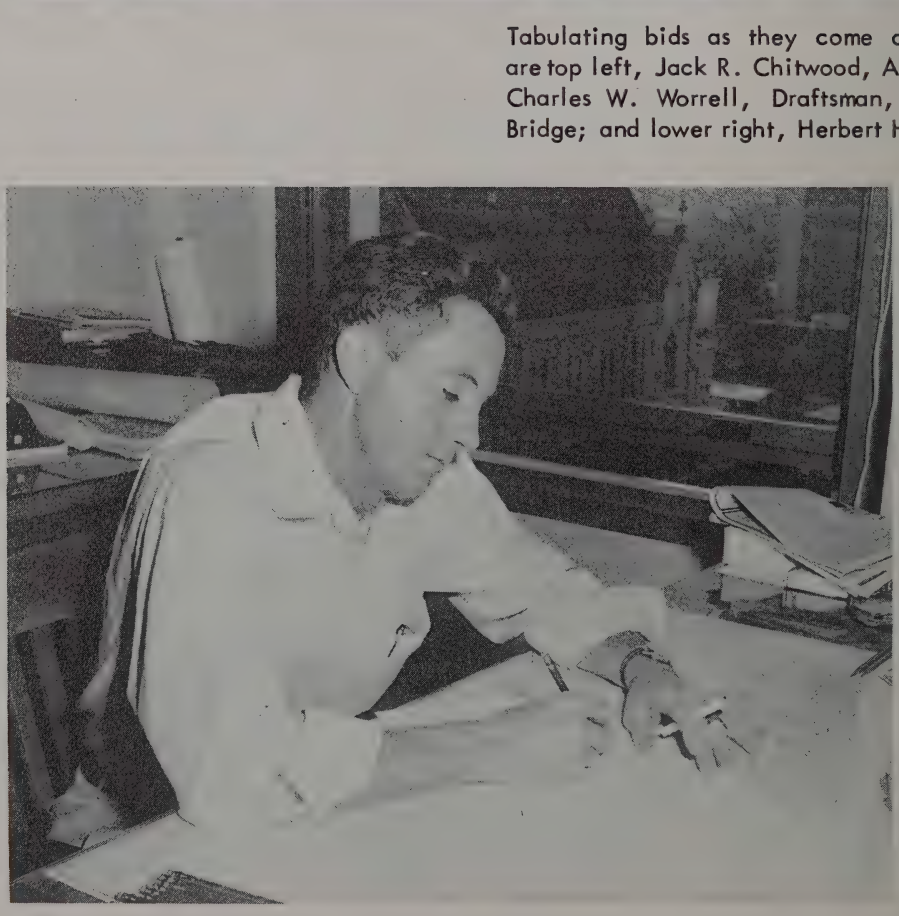
Waiting for the day's work to begin—Olaf Philippi, Assistant Construction Engineer; Kenneth C. Newell, Senior Clerk, Construction; and Jed N. Robinson, Engineer, Construction.

Marlin Smalley, Superintendent of Contracts, Aid Division, reads bids as they are opened.

Horace J. Warren, Senior Administrative Aide, Road Design, has for more than 28 years been in charge of the order of bids and the assembly of each letting.

Tom Ayers, Senior Office Assistant, Road Design, assists with assembly and order of lettings.

Tabulating bids as they come over th
are top left, Jack R. Chitwood, Associat
Charles W. Worrell, Draftsman, Bridg
Bridge; and lower right, Herbert H. Met



loudspeaker system from the hearing room
Designing Engineer, Bridge; lower left,
top right, Z.C. Falls, Senior Draftsman,
ger, Senior Draftsman, Bridge.

# AND

E.M. Ruth, Assistant District Engineer
District 16

On Labor Day, September 5, the effects of Hurricane Gladys first began to be felt in the Corpus Christi area. Next day heavy rains began along the coast and during one 24-hour period between eight and fourteen inches of rain were recorded at various points in and near Corpus Christi. Rains continued sporadically for the next two days with squalls moving generally inland. The Alice area received a total rainfall of approximately twelve inches during this period, and the entire area between Corpus Christi and Alice, and extending from about Sinton southward to the district line received rains of about a like amount.

As the rains intensified, the first damaging effects were felt in Refugio County. A minor washout occurred at the end of a bridge which had been left in place on a newly-constructed farm road, and a low-water section of an older farm road was closed by high water. High water then became a major consideration in the more southerly counties. Water ran over both farm roads and major highways. U.S. 181 was submerged north of Sinton, U.S. 281 went under at several points between Alice and Falfurrias, and U.S. 77 was overtopped briefly south of Kingsville. Meanwhile, most of the secondary highways and farm roads in this general area had water over them at numerous locations and to varying depths. However, the rains slowed just in time and only six farm roads in the entire area were ever officially closed to traffic. Of these roads, only two, F.M. 70 and F.M. 1930, which have low-water structures at major creeks, remained closed for periods in excess of 24 hours. In both instances, alternate routes for traffic are readily available.

All in all the road damage in this district was considerably less than might have been expected from rains of this magnitude. We think the primary reason is that this area had

# DISTRICT 16

Below is San Diego Creek in Alice, looking downstream from U.S. 281 bridge. Note bank erosion on new channel recently completed by Corps of Engineers. Rocks in stream bed were washed from riprapped bank in foreground.

This is the south end of U.S. 281 bridge over San Diego Creek in Alice, looking downstream. Here, men are shaping new dirt dumped on header bank to replace washed out material. This slope will be riprapped with broken concrete bound with Class "D" concrete. Note water mark on piling. Had this creek run bank full a major washout might have occurred.

Ditch retards on a farm highway. Extended dry weather caused the ground to crack under these checks and the first big rain found the cracks.

This picture was made on U.S. 77 north of Sinton. The drought-parched vegetation in this ditch was too sparse to prevent erosion.

suffered so much from dry weather recently that the parched fields soaked up a considerable portion of the water before runoff occurred. Most of the area farms had been recently plowed and this materially aided the soaking-up process.

During the height of the storm, highway maintenance crews were on a partial round-the-clock schedule, performing the chores which have become more or less routine for such periods of limited emergency. Mainly, they were staking and flaring flooded sections of road, closing and flagging sections where required, and continuously circulating over roads under their charge to spot trouble before, or as it developed. Of course, they had to pull a few trees away from bridge piers at the height of the flood, fill a few partial washouts, and do a little sandbagging while the water was up. As the waters subsided the major work became unclogging brush-filled structures, repairing shoulder washes, and doing some pavement patching in the most waterlogged sections.

As usual, this flood revealed the necessity for more protective riprapping at some bridge ends and for additional erosion control in some of the roadway ditches. This work always needs to be done as rapidly as possible after the damage occurs, since there is always the very real danger that more rain will fall on the already supersaturated countryside.

Under such conditions, even a rain of relatively minor intensity can sometimes multiply the cost of repair work many times.

Recently this area seems to be experiencing floods of the type generated by Gladys on about a two- or three-year frequency. These tropical disturbances do not always acquire the dignity of a name,, but the net effect of the heavy rainfall is the same. With Gladys, high tides were also experienced on the coast, but these tides had no appreciable effect on state roads in this area.

# ROADSIDE FIRES

The annual campaigns for prevention of roadside fires and the precautionary measures of the districts apparently have been effective. A spot check of five districts, covering practically every type of terrain in the state, revealed that in none of those areas are roadside fires a problem.

Districts 7, 10, and 20 reported that grass fires are infrequent occurrences. District 24 has had only one in the last eight years. That was three years ago on the right of way of U. S. 90 in eastern Brewster County and no particular damage was done. During the last ten years the thatched roofs have been burned off three roadside park arbors in the district; one was started when a truck caught fire while stopped at the park and the others were attributed to vandalism. This problem was easily solved by switching to corrugated aluminum roofs.

The most destructive fire District 4 personnel could remember was one five years ago. It was started by a locomotive on railroad right of way about half a mile west of U. S. 87 and 287 north of the Canadian River in Potter County. A high west wind was blowing and the fire burned to the highway, jumped two fire lanes and a 24-foot pavement, and burned about 1,000 acres.

However, District 4 Engineer James G. Lott says fire lanes are about 90 per cent effective if the blaze starts on the highway right of way. Most of the districts blade and maintain these lanes wherever possible. In some highly erosive soils it is not practical since the cutting of fire guards often creates an erosion problem.

The five districts surveyed are generally agreed as to the causes of roadside fires--burning matches and cigarettes thrown from cars, campfires, and possibly bottles and pieces of glass have intensified the sun's rays and ignited dry weeds and grass. Local people, tourists, and hunters contribute equally as far as carelessness is concerned, and vandals intentionally start many of them.

Local residents get the most of the blame in District 10 where roadside fires are usually in timbered areas and in old abandoned fields grown up with weeds and sage grass. It has long been the custom in East Texas to burn off old fields and wood lots, with the idea that this destroys insects, said the report from Tyler. These fires sometimes get out of control and burn extensive areas, but the damage is usually minor, except to young timber.

Then there are always freakish cases where the fires are started in totally unexpected ways. In District 7 one was started adjacent to a farm-to-market road under construction when the wind changed direction suddenly and burning embers were blown across the contractor's fire guard while he was burning brush. No livestock was lost but about 300 acres were burned. This was the most extensive grass fire that any of the personnel can remember in the district.

Annual damage to highway property caused by these fires is very small. Estimates of damage ran like this: District 10, "minor"; District 24, "very small"; District 4, "minimum damage to roadside plantings, the value of which is difficult to estimate in dollars"; District 7, "will not exceed $1,000"; and District 20, "we can recall no highway property destroyed by roadside fires, and the fighting of fires accounts for only a minute portion of our maintenance expenditure."

However, this doesn't mean that roadside fires are completely a thing of the past and that precautionary measures have been abandoned. None of the districts maintains any special fire-fighting equipment but fires are often discovered and extinguished by passing maintenance personnel during daily maintenance inspection. Passing motorists, property owners, and law officials also report fires that they spot on highway right of way.

And the districts are continuing preventive measures with periodic blading of fire guards and widespread use of the standard signs, "Please Help Prevent Grass Fires." Employees are constantly reminded that proper precautions must be taken to control any fire necessary for them to use. Discussions are held in maintenance foremen's meetings and memoranda are sent out to personnel on the subject of roadside fire prevention. These measures have gone a long way toward helping to cut fires to a minimum.

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## PROSPECTING, ANYONE?

"Uranium prospecting may be carried on at many financial levels . . .

"The charge for uranium assay ranges from $5 to $10 a sample and some laboratories charge a preparation fee additionally.

"A good compass for rough surveying . . . retails for about $35 and is invaluable for work in the field.

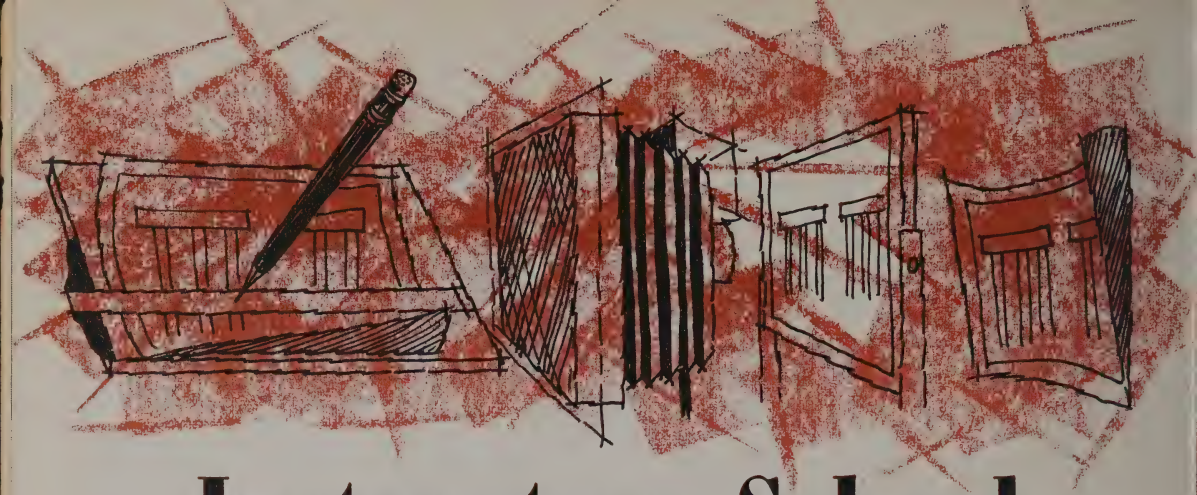
"A complete listing of land owned by the State of Texas may be obtained from the Land Office for a fee of $50.

"A geiger counter can be purchased at a cost ranging from $50 to $300; portable scintillation counters range from $400 to $2,000.

"The ideal prospector is energetic, thorough, and above all an incurable optimist possessed of great curiosity."

- - - And rich, too?

(From Mineral Resource Circular No. 37, Bureau of Economic Geology, University of Texas.)



# Instructors School

Hubert A. Henry
Road Design Division

In a memorandum dated June 21, 1955, D. C. Greer noted with a great deal of satisfaction the progress that has been made in placing into effect the time-saving procedure relative to the reproduction of plans in the pencil stage. He feels that this is a progressive step that will conserve engineering time as well as reduce costs. He further stated, "The progress made in this particular instance prompts the thought that possibly, over a period of many years, we may have adopted various plan preparation procedures that, under present conditions, might logically be classified as desirable rather than essential. As our plan volume unquestionably will increase in the near future, I believe it would be desirable that we carefully analyze the various details that we require in our plans and specifications to determine whether or not we could streamline this part of our work and make further savings both in engineering time and in costs."

Mr. Greer then designated a continuing committee, since called the Plan Preparation Committee, made up of the Engineer Road Design Division, Engineer Bridge Division, and Engineer Land Service Roads Division, with T. S. Huff as chairman, in cooperation with the Engineer Construction Division and Engineer Reproduction Division to study this problem and possibly culminate their studies with either group meetings in the field with plan preparation employees or by a type of Austin headquarters school.

The Committee, after weighing the many aspects of such a study, decided to call a conference in the Austin Office. The conference was called an Instructors School inasmuch as the men attending this meeting would act as instructors in the future meetings to be held in their respective districts.

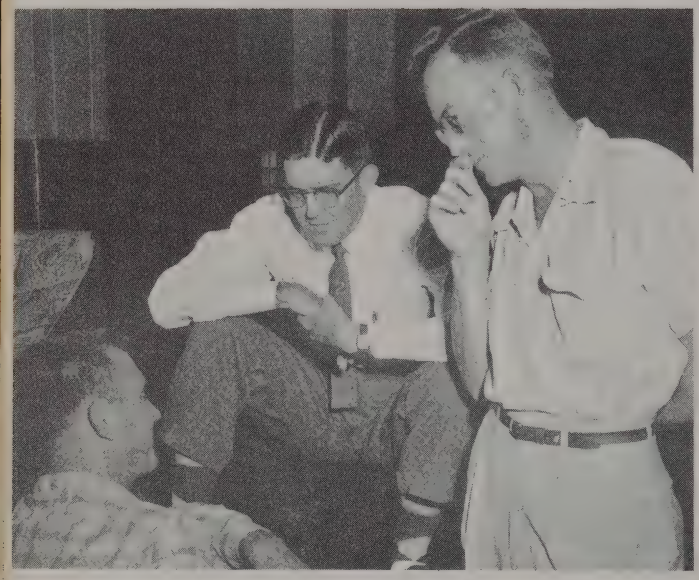
On July 22, 1955, the Committee met and designated A. L. Chollar, Supervising Design Engineer for the Road Design Division, as coordinator of the school and appointed as representatives of the various divisions concerned: Sam Huff and E. A. Jelinek for the Bridge Division; R. J. Lafrentz and W. F. Gustafson, Land Service Roads Division; W. R. Davis and E. W. Duval, Road Design Division; O. A. Philippi, Construction Division; and Chester Seekatz, Operations Division, to coordinate the work of their respective Divisions. The Road Design Division was designated to handle the registration with H. A. Henry appointed

Three District 23 men discuss a point during a coffee break at the Instructors School on plan preparation. In the usual order are T.R. Kennedy, Office Engineer at Brownwood; Jack H. Kirby, Resident Engineer at Brady; and R.P. Haun Jr., Resident Engineer at Eastland.

A.L. Chollar, Supervising Designing Engineer, Road Design Division, conducts a discussion period following one of the papers. He served as coordinator of the school.

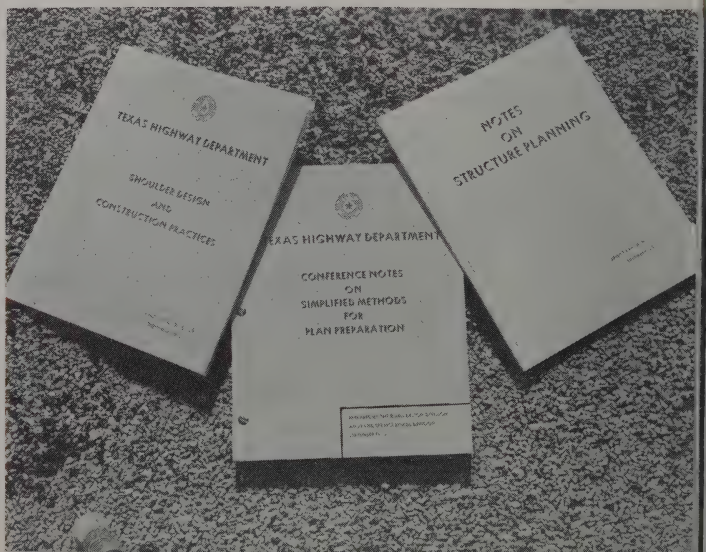
W.H. Barron, Senior Draftsman at Tyler, and Ed Campbell, Resident Engineer at Rusk, holds a two-man conference during one of the recesses.

Beswick Wray, Senior Resident Engineer at Corpus Christi, raises a question for discussion.



District 25 men meet to talk over new ideas on plan preparation—or perhaps on the Dodgers' chances of winning the World Series. From left to right are George R. Wall, Senior Inspector at Munday; B. V. Marrs, Engineering Assistant at Childress; and Arville Coyle, Resident Engineer at Childress.

Textbooks for the Instructors School were prepared by the three divisions in charge of the school—Road Design, Bridge, and Land Service Roads.


TEXAS HIGHWAY DEPARTMENT
SHOULDER DESIGN AND CONSTRUCTION PRACTICES
TEXAS HIGHWAY DEPARTMENT
CONFERENCE NOTES ON SIMPLIFIED METHODS FOR PLAN PREPARATION
NOTES ON STRUCTURE PLANNING

registrar.

Representatives from every district and expressway office of the Highway Department met in the main auditorium of the Highway Building in Austin for three days, September 28, 29, and 30, to discuss proposed new techniques designed to simplify plan preparation.

The school was conducted as a conference, with a formal presentation of a subject by a member of one of the Austin divisions, followed by comments from another member of the Austin Office who would then lead the discussions from the floor. Each division had a section of the program which was under the direction of the representatives listed above. Most papers that were read were received with considerable interest and the comments from the students during the discussion periods added much information to that presented in the formal papers.

The first day of the school was under the direction of the Road Design Division. Mr. Greer gave the address of welcome, and T. S. Huff outlined the purpose and objectives of the course. Most of the remainder of the day was devoted to simplified methods for preparation of plans for projects on the State Highway System.

The second day, under the direction of the Land Service Roads Division, dealt with simplification of plans for the farm-to-market road projects. P. S. Bailey, Engineer Land Service Roads Division, welcomed the students to the second section of the school and offered his comments on the problem at hand.

In the evening of the second day the class was split into three groups for a visit to the reproduction plant at Camp Hubbard which was arranged by R. C. Faltinson, Engineer-Manager Operations Division, to study reproduction methods and techniques that will reduce time spent in plan preparation. The tours and commentaries for this very interesting and informative visit were provided by members of the Operations Division.

The last day of the school was under the direction of the Bridge Division. Simplified methods for the preparation of structure plans were presented and discussed. R. B. Alexander, Engineer Bridge Division, presented the introductory remarks to this section of the program.

A specialized paper on shoulder design was presented by T. S. Huff as an introduction to a new method of design and construction for shoulders, and not as a method of simplification of plan preparation.

O. A. Philippi, Assistant Engineer Construction Division, presented the final section of the program with a review and comments of the Construction Division.

All material covered in the various papers has been printed and bound to be distributed for study and reference. These books are available to all districts, divisions, and expressway offices in the Highway Department.

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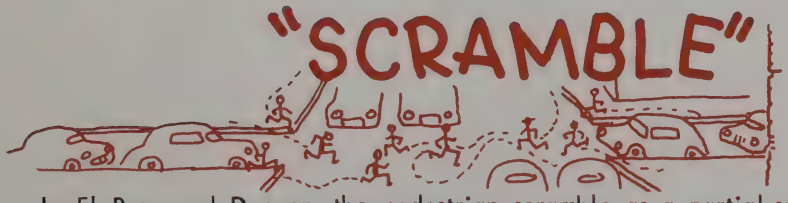


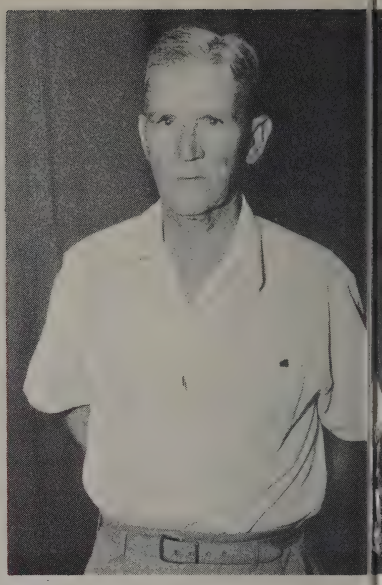

In El Paso and Denver, the pedestrian scramble as a partial solution to traffic congestion has been pronounced highly successful. All vehicles stop for 30 seconds while pedestrians "scramble," crossing intersections in any and all directions, even diagonally. Then all pedestrians stop while vehicles get green lights in turn. In this way, when a line of traffic gets a green light, it can move out, undeterred by pedestrians.

(Waco News-Tribune - April 10, 1955)

District 17 was established on March 1, 1925, with its headquarters at Caldwell. In 1927 its main office was moved to Bryan. At the present time this district has 1, 825 miles of highways within its boundaries. It is bounded on the east almost entirely by the Trinity River, and must also bridge the Navasota, Brazos, Little, and San Gabriel Rivers, as well as numerous smaller streams and creeks.

Lying partly in East Texas, partly in Central Texas, the District encompasses some of the earliest settled territory of the state. One of the most famous historical highways in the nation, the Old San Antonio Road (El Camino Real), traverses the center of the district. Part of this area was included in the Moses and Stephen Austin land grant from the Mexican government, and Andy Robinson, one of Austin's "old three hundred" families, became the first permanent settler on the Brazos River, near the present town of Washington.

The area has come a long way since those days in 1821. Today it is a region of fine farms, post oak and pine forests, and pasture lands, all served by fine broad highways and paved all - weather farm - to - market roads. District 17 personnel keep busy building and maintaining the highways that serve this land that was once visited by the French explorer La Salle, whose monument stands at Navasota; by Sam Houston's armies who camped at Groce's Retreat on their way to San Jacinto; and by Austin's colonists who were the first American settlers in the State of Texas.



John E. Blair, District Enginee
Bryan, heads the organization.

# THE DISTRICTS F

Placing guard posts around "Y
and Tim J. Hubacek, Common

Going over Austin correspondence are Joe G. Hanover, Senior Resident Engineer, and Allene P. Collins, Typist.

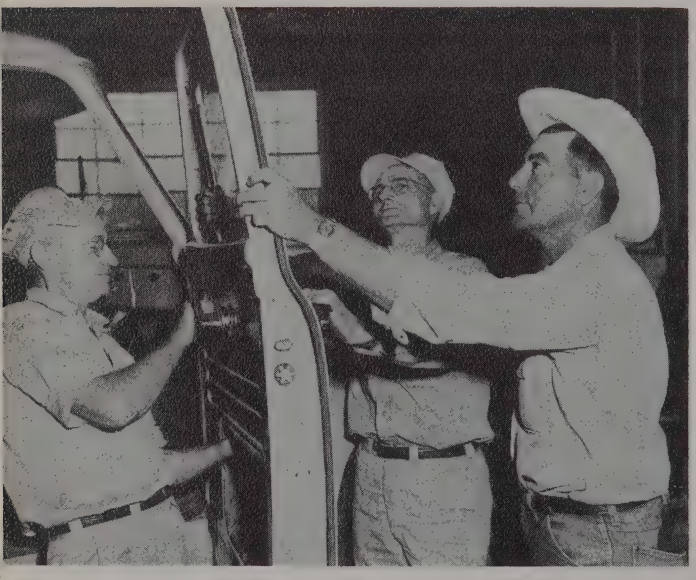
## ...SS IN REVIEW DISTRICT 17

...in Bryan are Roy H. Walker ...ore s.

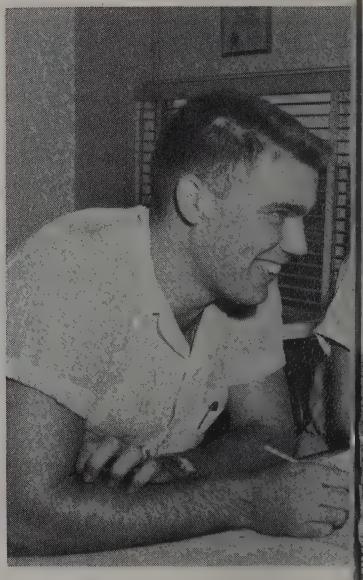
Looking over an issue of TEXAS HIGHWAYS are Jo Ann Streetman, Typist, and Bebe Atmar, Junior Clerk.

A good joke always helps the work along. Repairing a Lima shovel are E.A. Nolan, Luther C. Little, and James W. Smith, all Skilled Laborers.

This big board keeps equipment tag is Mrs. Ruby Buchanan.



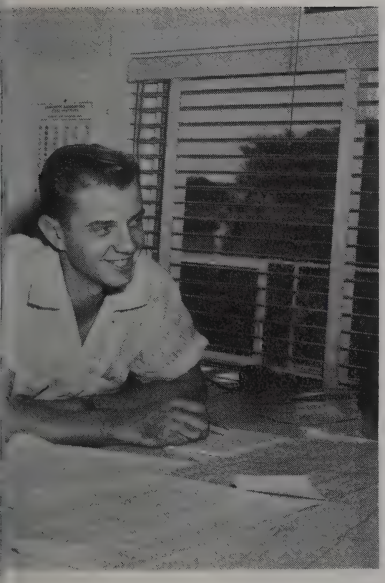
Replacing glass in a truck door has the undivided attention of Hussey Brewer and J.W. Dawson, Skilled Laborers, and Luke Marino, Semi-skilled Laborer.



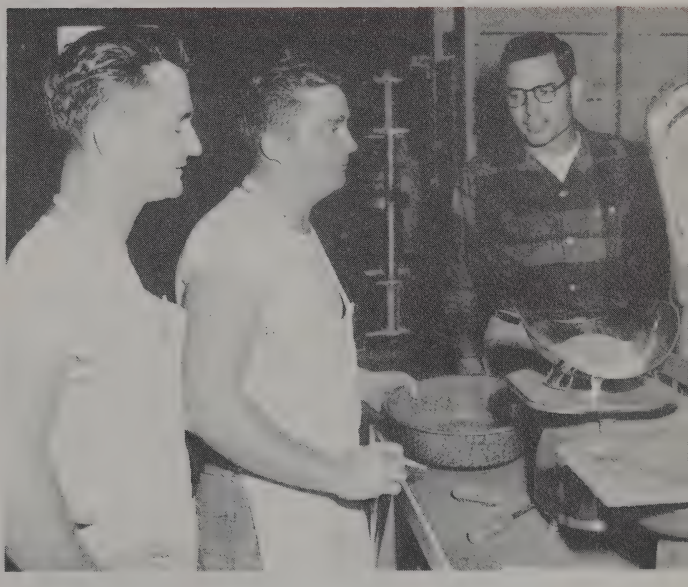
Jim Dockery, Rodman, and Assistant, are working on F.M

location straight. Changing a

District personnel take time out for a coffee break. Left to right are C.B. Thames, J.M. McLain, E.S. Swafford, R.M. Wade, Mrs. Gertrude Lloyd, M.S. Benson, W.C. Vaughan, Mrs. Ladell Burnette, A.A. Vance, Mrs. Ruby Buchanan, and O.L. Crain.



Delton A. Kittrell, Engineering 487 in Milam County.

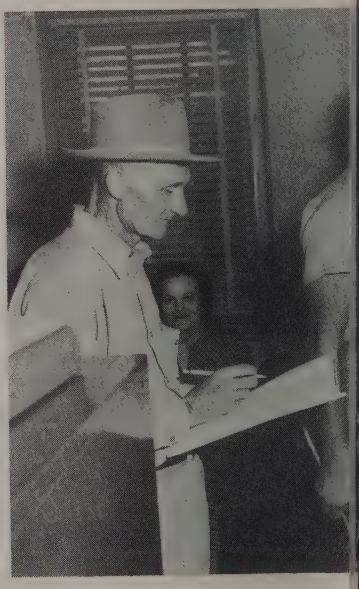


Running a screen analysis of flexible base material is part of a day's work for Charles McCulloch and Dan Ayers, Rodmen, and Robert Long, Engineering Assistant.

Discussing construction problems are C.B. Thames, Assistant District Engineer, and A.A. Vance, Senior Resident Engineer.

I.D. Harrison, Skilled Laborer, Laborer, are busy remodeling

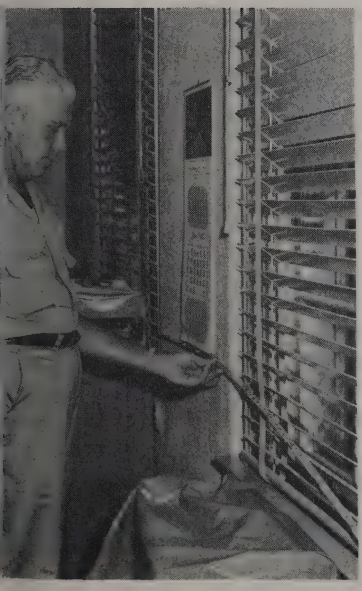
Discussing plans are James Mahle, Rodman, and D.D. Williamson Jr., Senior Engineering Assistant.



Henry Odstrcil, Semi-skilled L Inspector, are checking plaste remodeling of District Office

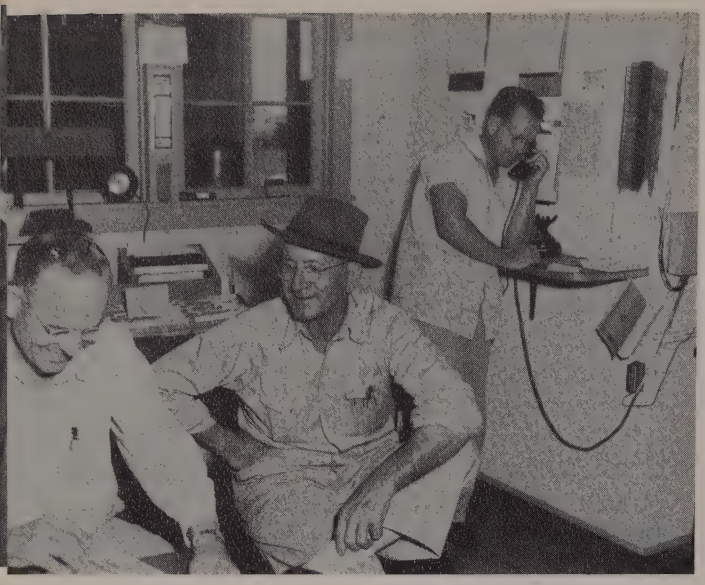
and Joe Wehrman, Semi-skilled
aint shop.

Earthwork quantities for highway widening get a going over from Doyle B. Smith and Larry Evans, Rodmen; Francis W. Lynch, Draftsman; and James O'Connell, Senior Engineering Assistant.

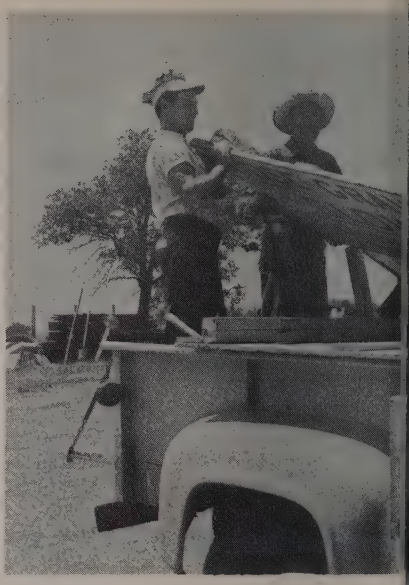


orer, and M.S. Benson, Senior
walls to be replaced in interior

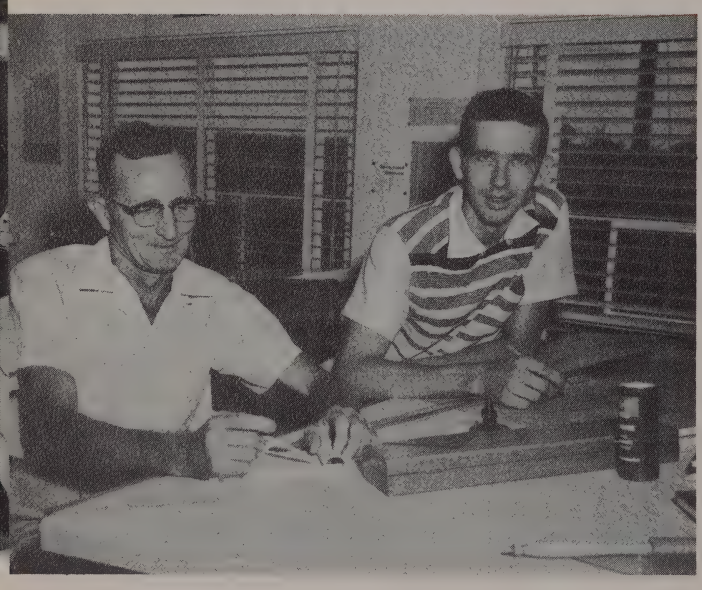
Discussing prices on bid items are W.J. Byford, Engineering Assistant; R.C. Qualtrough, Senior Engineering Assistant; Roy Rychlik, Rodman; and Walter C. Jones, Senior Instrumentman.



Discussing day's work are F.D. Sample, Assistant Warehouseman, H.R. Price, Senior Shop Foreman, and W.A. Bullock, Assistant Warehouseman.



Unloading construction signs at th
Hearne are R.E. Starkey, J.F.
Turner, Semi-skilled Laborers.

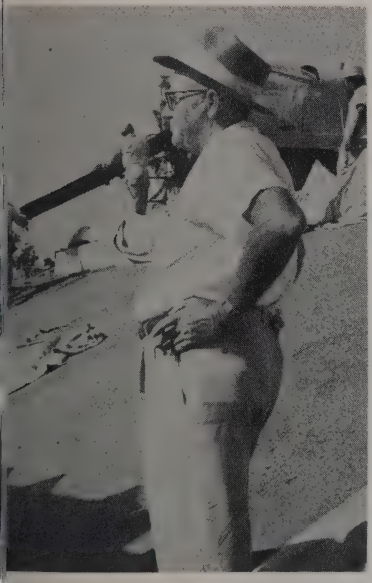


Johnie Hay, Senior Party Chief, and Nick Turnham, Junior Office Assistant, are working on final quantities.

Inspecting concrete riprap o
of Normangee are Walter C. J
A.A. Vance, Senior Resident

maintenance warehouse in
Mikolajewski, and W. W.

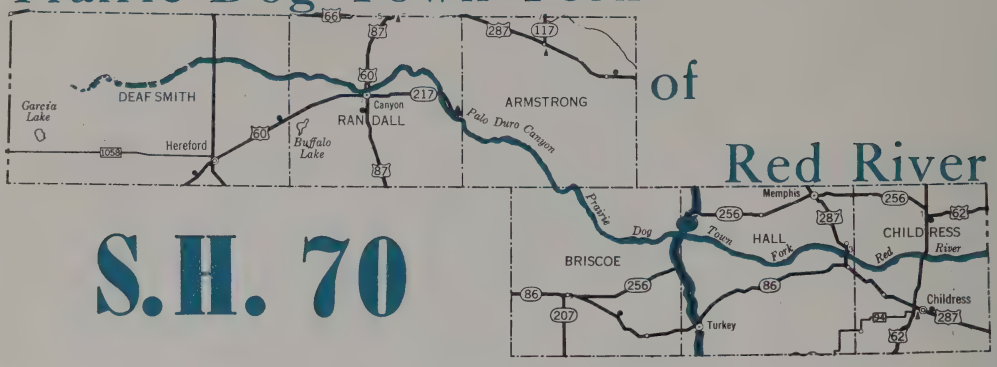
Employees in the District Accountant's office pose for a group shot. Left to right are Eloise Knox, Typist; Mrs. Gertrude Lloyd, District Office Clerk; Mrs. Claudell McDonald, Typist; Mrs. Mary Sue McBride, Junior Clerk; Emmett S. Swafford, Chief District Accountant; Mrs. Wanda Lee Hoye, Typist; W.C. Vaughan, Senior Accountant; Russell Wade, District Bookkeeper; Mrs. Ona Tatum, District Office Clerk; James Sturrock, District Office Clerk; and Celia Womack, Junior Clerk.



the Old San Antonio Road east
nes, Senior Instrumentman, and
ngineer.

Going over a report on asphalt surface treatment are Joseph M. McLain, Resident Engineer; M.A. Coleman, Associate Resident Engineer; and H.E. Bain, Senior Draftsman.

# Prairie Dog Town Fork of Red River




# S.H. 70

The Prairie Dog Town Fork of the Red River rises in Deaf Smith County almost at the New Mexico State Line, and as it flows eastward down off the Cap Rock it cuts through the wild and spectacular Palo Duro Canyon. Eroded by the river over eons of time, this canyon is one of the scenic attractions of the state. As it leaves the Cap Rock and the canyon the river enters the "breaks" — a wild confusion of tumbled rock, dry creek beds, arroyos, and tangled mesquite and chapparal thickets.

Traveling through Briscoe and Hall Counties the river passes through fine farm and ranch country where beef cattle, cotton, and small grains are raised. Crossing the river has long been a problem, and for years the residents of the Antelope Flat area had virtually no way to get their products to markets or their children to school. One old county-maintained bridge in Briscoe County was considered so unsafe that local residents hauled the school bus across the river with tandem tractors rather than risk it on the rickety old structure.

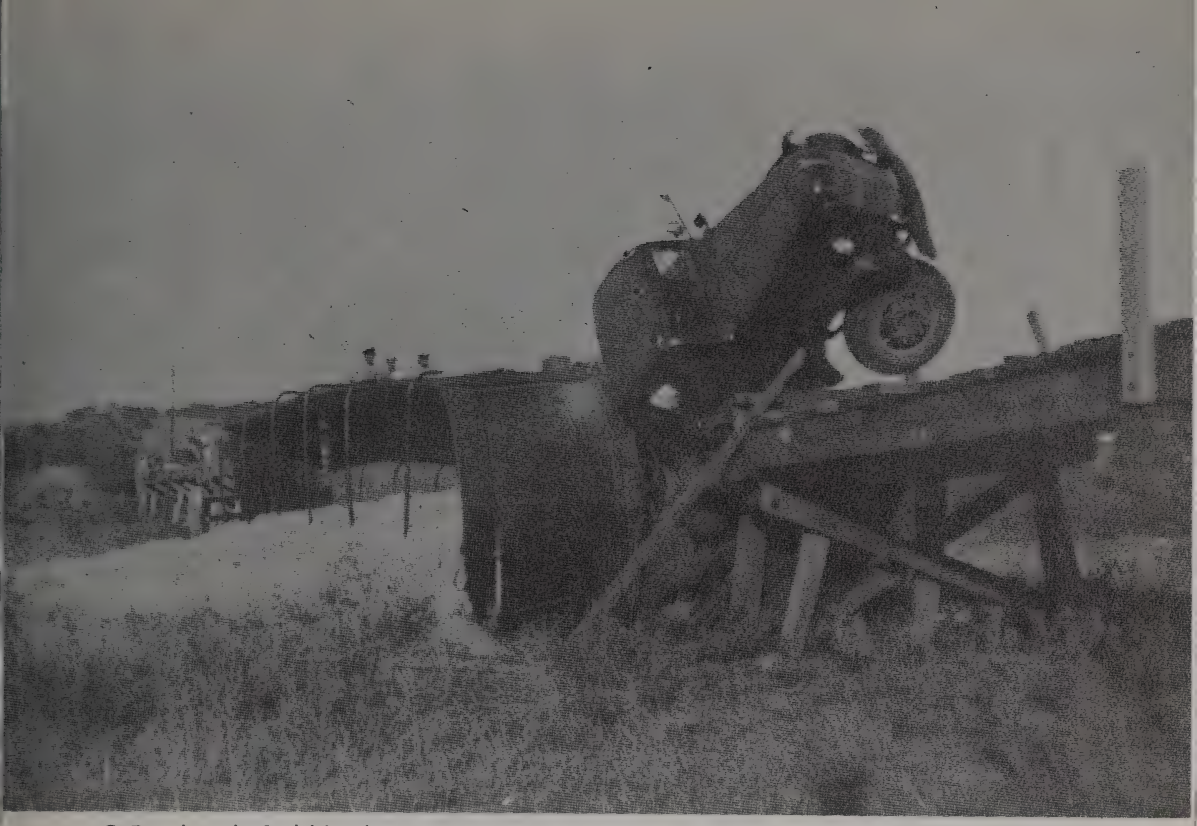
In September, 1951, contracts were let for a new bridge on State 70 by the Highway Department. The new concrete and steel structure, completed in 1952, is 1,232 feet long with a 24-foot roadway and 10-inch curbs. Costing $201,313, the bridge used 1,570 cubic yards of concrete, 323,000 pounds of reinforcing steel, and 50,000 pounds of structural steel. Jetties were constructed on both sides of the bridge by Highway Department crews to protect it from the uncertain flow of the river. After completion of this segment of State 70 and the opening of the new Canadian River Bridge in Roberts County earlier this year, the route is open for the first time for its entire length from Bronte to the Oklahoma State Line near Perryton.

● Palo Duro Canyon, one of the scenic attractions of the state, has been cut by centuries of action by the Red River.

● This old horse and buggy crossing of the Prairie Dog Town Fork of the Red River has been troubling residents of Hall and Briscoe Counties for years.

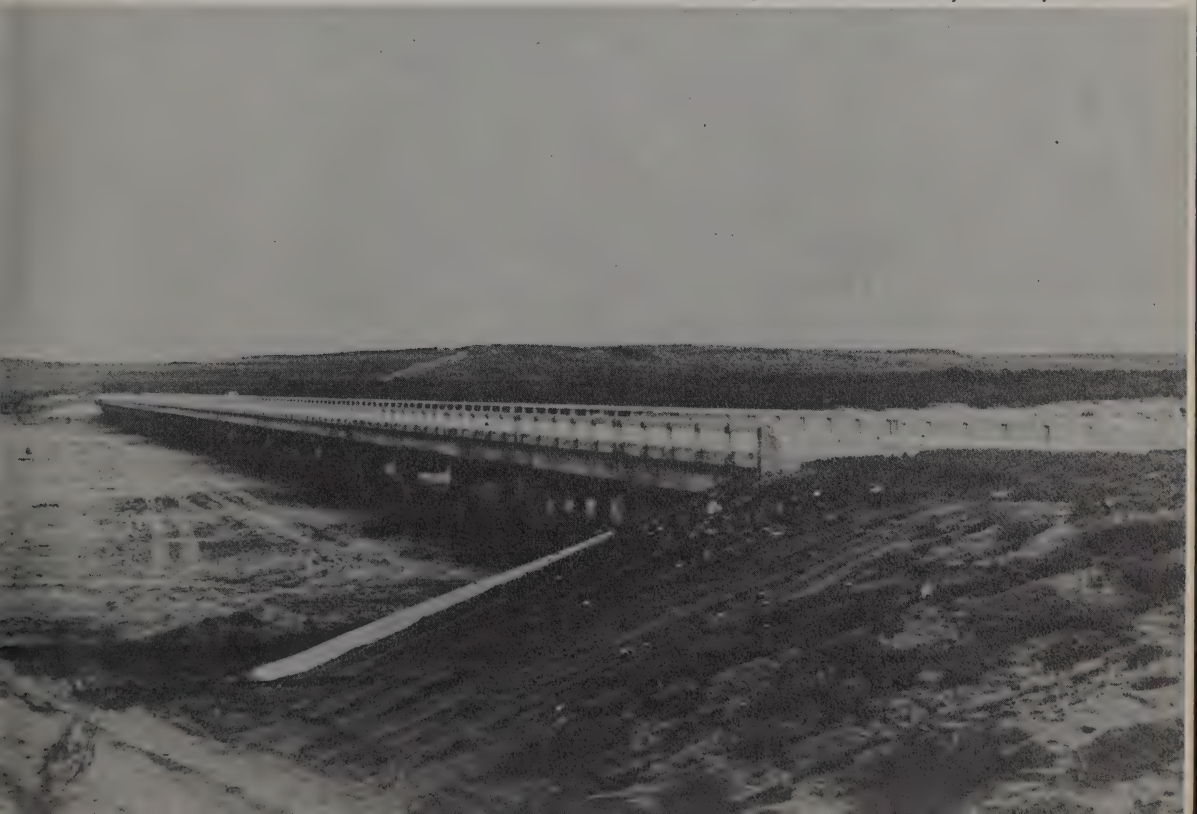
● School bus stops at end of bridge to let children get out and walk across old county-maintained bridge.

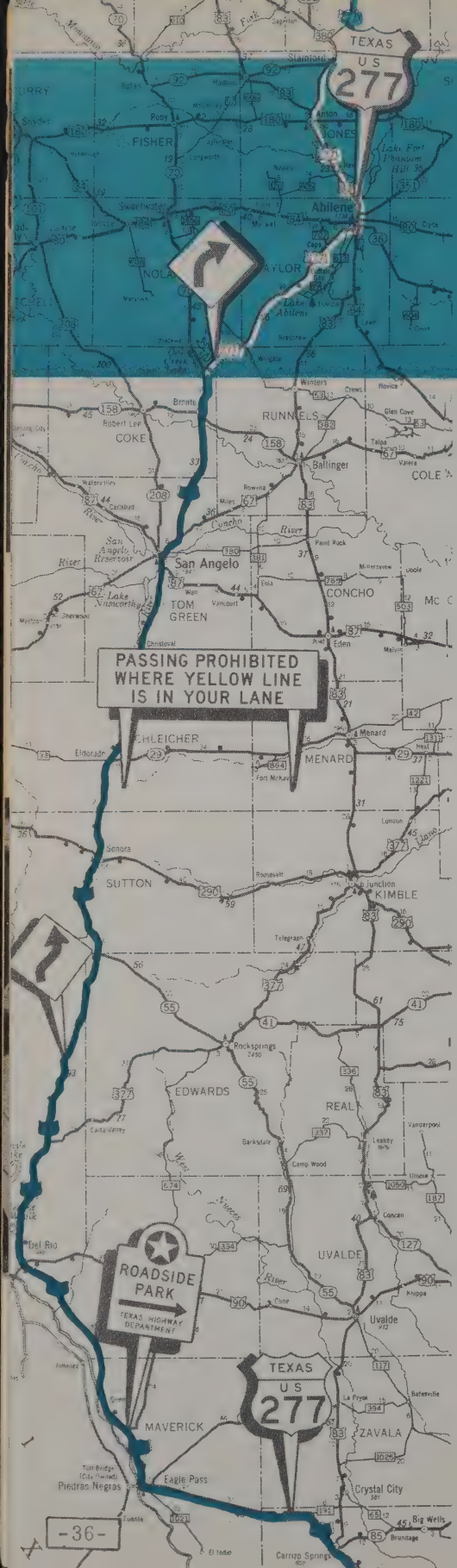
Ranch and farm children of the area went to school the hard way before construction of new State Highway 70 crossing. Farmers take time out from chores to haul bus
● across river bed rather than risk ancient structure.



● Final end of old bridge came when trucker tried to haul out a load of cotton seed.

● Dedication cerimonies for the new highway and bridge were held early in July.






# travel map

The Department's Official Highway Travel Map is a project in which everyone in the Department takes pride. And the districts can take a lot of the credit as well. District personnel play a bigger role, probably, than any of them realize in getting the map out each year. It is they who provide the greatest part of the information used and help to decide what will be most valuable and interesting to motorists.

They are the primary source for information on highways and farm-to-market roads, material needed for city insets, roadside parks, and the current populations of the towns and cities. Around the first of October, each district engineer is sent a full-scale cutout of his district along with a request to show on this cutout any corrections or changes that should be made on the next year's map. Since it takes from two to three months to produce the map after revisions are received from the districts, they must not only give up-to-the-minute information, but must look ahead several months so that any highways that will be completed or any changes that may be in effect the first part of the year will be shown on the map.

All this information is gathered from each of the 25 districts and is sifted in the office of the Information and Statistics Division, which handles all phases of the production of the map. Squeezing the vast state of Texas down to a manageable size map naturally limits the space, and as a result,

limits the things that can be shown. Since the map is designed as a guide for the traveling public in cross-country travel, information is confined to things of value and interest to these motorists. Thus, such details as exact mileages and alignments are sometimes sacrificed for the sake of clarity and readability.

All state and U.S. highways are included, with four-lane divided highways of any appreciable length indicated, but farm-to-market roads shown are limited to those that connect important communities, highways, or major scenic attractions, or roads that for other reasons might be of value to motorists. Contrary to popular belief, showing these farm-to-market roads does not generate heavy truck travel. However, it does increase automobile travel.

All state parks are shown, but only the lakes that are public and to which the public has access are included. In 1951, roadside parks were added, being indicated by a small green dot. As a further aid to travelers, insets of major cities are shown along with the state map to help them follow highways through these cities. They are not intended to be city maps.

Changes on the map must be made gradually, with only a few additions or deductions in any one year. If too many changes are made in one edition, criticism both for and against pour in. A small relief map will be added to the 1956 edition which will partially answer tourists' questions about the terrain of the state.

Getting this travel map out is just as big a job as it appears it would be, and it takes the close co-operation of everyone concerned to produce it. There are more than 1,300 towns on the 1955 map, with the mileage shown between all these various points. Measured from some prominent spot such as a court house or post office, usually near the heart of each city, the black mileages showing distances between junctions and villages are figured to the nearest mile rather than making them exact fractions. However, these fractions are included in computing the cumulative red mileages between the red triangles shown at certain points and as a result the red mileages do not always equal the total of the black mileages. But beginning with the 1956 map the cumulative mileages and the total of black mileages will be made equal in order to avoid confusion.

There are 936 triangle mileages shown on this year's map. These make it possible to determine the distance between various places without going through the tedious process of adding it up.

The Texas Almanac is used as the final authority for any other information appearing on the map, such as the spelling of town names. Often there is disagreement within the city itself as to the proper spelling and reference books will also vary.

The Information and Statistics Division aims at the first of the year in getting the map out but there are many obstacles that can arise. Often the revised cutouts are not promptly returned and it is late in getting to the printer. Then other complications may arise in the printing, so it is often late February or March before it comes off the presses ready for distribution.

The map is drawn to full scale—twice the size of the final product—and is photographically reduced to 28 by 36 inches. Drawn in black and white, the map has the color applied during the printing process. This requires four negatives, one for each of the four process colors used—black, blue, yellow, and red. It is this process that is responsible for many of the errors. For instance, the red highway numbers and town names, anything appearing in red, will be only on the negative for red ink and will be opaqued off all the others. Some information is accidentally taken off the wrong negative and is omitted from the map. Some major revisions, including the correction of any errors, are made

after the first printing and any of these omissions are added. Color is used to make the map easier to read and make it possible to spot quickly certain kinds of information. For example, all recreational information is shown in green, water in blue, and cities of more than 100,000 population in red.

The pictorial side of the map is usually in the printing stage by the time work is begun on the map itself, since it takes several months to make color separation plates and do the actual printing. Designed to sell travel to and in Texas, the pictures represent geographically all areas of the state and are typical of things to do and see in Texas.

The popularity of the maps can be judged from the fact that 500,000 were printed in 1954 and this year the figure went up to 650,000. They were produced at a cost of $71.90 per thousand this year and the same bid has been accepted for printing the 1956 edition. The districts distributed 96,000 of the 1954 maps and had distributed about 110,000 as of November 1 this year, the remainder being handled through the Austin office and the Travel Information Bureaus.

About half of the total maps printed are requested by Texans while the rest go to fill out-of-state requests. Many of them go to motor vehicle owners who send in map cards picked up in the tax collectors' offices when they register their cars. A new experiment was tried with these cards this year, and judging from the returns, was highly successful. Formerly, these cards were handed out with the license receipts but during rushes many registrants failed to get one. This year, in certain chosen test offices the cards were placed in boxes that were set up in conspicuous places. Fifteen counties were selected, the majority of which were in the Austin vicinity and the others near the Information Bureaus so that Highway Department personnel could see how the idea was received. Seventy boxes were used in 21 different places where license plates were sold in these counties. This meant roughly 10 per cent of the total vehicles registered in the state were served by these map card boxes.

TEXAS
Free Official Highway Map
Mail this card with your name and address to the Texas Highway Department for your complimentary copy of the 1956 Official Highway Travel Map.
Name
(Please Print Plainly)
Address
City
Postal Zone
State
(Please Do Not Abbreviate)
PLEASE DO NOT WRITE OUTSIDE OF BORDER

This is the new map card to be used in 1956. Specially designed boxes, filled with these cards, are to be placed in each tax collector's office in the state. Motor vehicle owners may pick up a card when registering their cars and send it in for a free copy of the map.

The returns were more than twice as great where the boxes were used as where the cards were handed out by the collectors. As of April 15, which included the peak of registration for the year, about 4.2 per cent of the total registrants returned cards that had been placed in boxes, as compared with only a 1.9 per cent return of the others. Next year, map card boxes are to be placed in all tax collectors' offices.

This system of making the cards available at places where the license plates are sold theoretically gives every Texas motorist a chance to get a copy of the map and is another forward step in the Department's public relations program.

# Personnel Changes

H. L. Arno, Director of Personnel

District 1

County Residency, Sulphur Springs, to District 24, County Residency, El Paso: G.L. Turner, Senior Resident Engineer, transferred as Senior Designing Engineer August 15, 1955.

District 9

County Residency, Groesbeck: Elton B. Evans changed from Resident Engineer to Senior Resident Engineer September 1, 1955.

District Headquarters, Waco: Christopher C. Edwards changed from Designing Engineer to Senior Designing Engineer September 1, 1955.

District 17

County Residency, Bryan: Joseph M. McLain changed from Resident Engineer to Senior Resident Engineer September 1, 1955.

District 18

District Headquarters, Dallas, to District 18, County Residency, Dallas: G. F. Mann, Senior Designing Engineer, transferred August 3, 1955.

District Headquarters, Dallas, to District 18, County Residency, Dallas: W.E. Williams, Senior Resident Engineer, transferred August 16, 1955.

Road Design Division, Austin

Archie H. Christian, Assistant Engineer, Road Design, changed to Expressway Engineer September 1, 1955.

Probably more people in the state of Texas have dealings—either directly or indirectly—with the Motor Vehicle Division of the Highway Department than with any other branch of state government. It exercises general supervision over all motor vehicles registered in the state through the county tax assessor-collectors, issues license plates to all counties and files receipts for each plate, and issues certificates of title to all motor vehicles sold or encumbered in Texas.

Ever since its inception as a division in 1945, Motor Vehicle has been housed by sections in various places in Austin, in the main building downtown, Bruggerhoff Building, K. C. Hall, the Prewitt Building, and Reproduction and a quonset hut at Camp Hubbard.

Contracts for a new building for the entire Division were let in early spring of 1954, and actual construction started in April of that year. The 40,000-square-foot building cost approximately $600,000, and was completed in June.

# MVD OPEN HOUSE

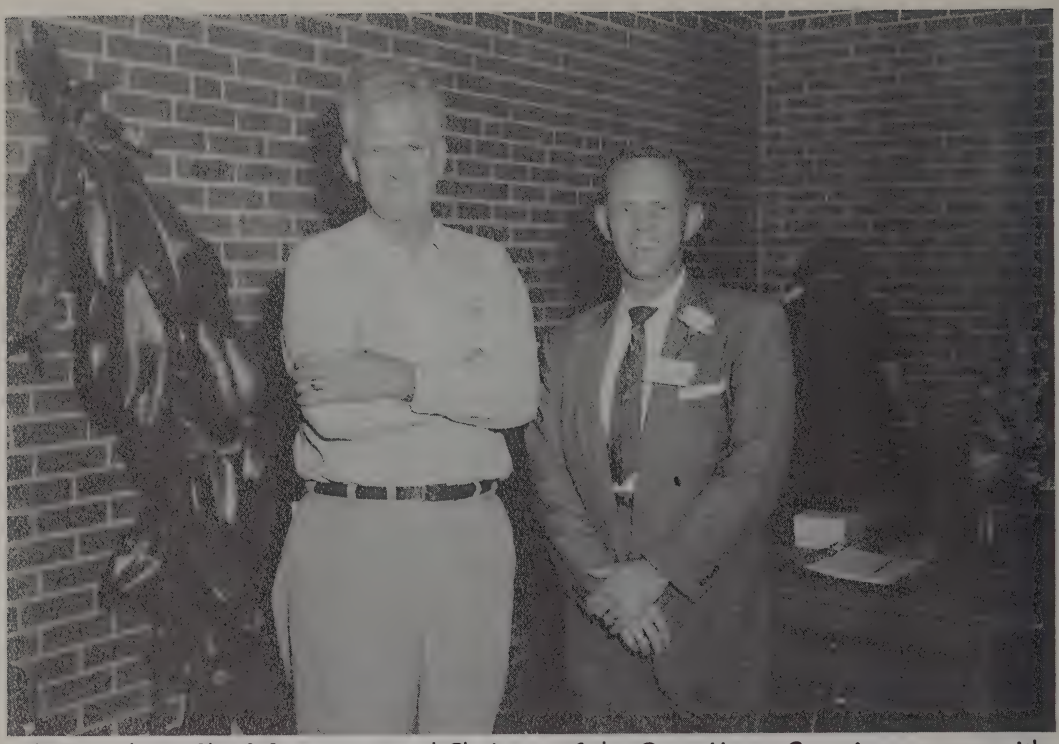
Home at last to Motor Vehicle's scattered sections is this new building north of testing labs at Camp Hubbard.

D.T. Harkrider, Director of Motor Vehicle Division, chats with George Pendergrass, Director of Department's Accounting Division.

On September 30 an open house was held by the Division, and was planned to show visitors how the Division operates as well as the new building. Held from 3 until 5 o'clock in the afternoon, and again from 7 until 9:30 that night, all employees of the Division were on duty at night so that visitors could see the actual working operations. Twelve guides conducted tours through the building, explaining all activities, and ending each excursion at the coffee shop where refreshments were served.

Souvenir license plates and certificates of title were given away by the Division. The plates were miniatures, and the sample titles were dummy certificates pointing out the fact that some 12,000 titles per day are issued by the Division. Motor vehicle registrations will exceed four million this registration year, which will end March 31, 1956. Three copies of each registration receipt are sent to the Division. This means at least twelve million of these receipts will have been processed at the close of the year. In addition to these, registrations change hands all through the year, which means still more receipts must be processed. Of these more than four million vehicles many needed or will need a title for the first time, and many will change hands—some changing ownership several times during the course of a year. All this adds up to enough work to keep some 233 employees busy the year round.

All of these operations were shown and explained in the tours—how titles are made by a photographic process so that there can be no mistakes in the final certificate, unless there is an error in the application; the mailing room where the tremendous loads of incoming and outgoing mail are handled each day; the rows and rows of filing cabinets filled with millions of motor cards (copies of titles) and



Bob Townsley, Chief Supervisor and Chairman of the Open House Committee, poses with his cousin, Sid Townsley, Section Supervisor in Materials and Tests.

Bob Brewer, Chief Supervisor, visits with guests at the Open House.

Addie Mae Williamson, Junior Clerk, registers two visitors while Bob Brewer waits to start them on their guided tour of the Division's operations.

Jim Taylor, head of Texas Motor Transportation Association, listens as J.R. Hunnicutt, Senior Examiner, and D.T. Harkrider explain the workings of the Division. In the background is Bart Couch, Chief, Certificate of Title.

Jeanette Parker, Junior Clerk, registers one of the more than one thousand guests who toured the new building.

license receipts. The three copies of each receipt are filed in three different files. All these files enable the Division to have a system of checks that guard against the issuance of titles on stolen cars, and enable employees to give police important information on these stolen cars, or other vital information.

There is also an information center where calls can be handled quickly and efficiently 24 hours a day seven days a week. The Department of Public Safety has two straight lines to the center, and in a matter of minutes, can have any facts they need on a motor vehicle in any part of the state. The information center also reaches out of the state. On a teletype machine, messages are received from and transmitted to enforcement agencies all over the nation.

In the microfilm room, more than 100 million documents, all evidence sent in with title application and all license receipts, are filed on film. Also of interest to people touring the building was a display of Texas license plates dating back to 1916, the days when a number was issued and each man made his own plates. During the afternoon a twenty-minute movie was run in the conference room showing the operations of Motor Vehicle Division and the making of license plates at Huntsville. At night, the movie was moved out to the terrace.

D. T. Harkrider is director of Motor Vehicle Division, with R. W. Weddell serving as Chief of Registration, and Bart Couch, Chief of Titles. Bob Townsley, Chief Supervisor of the Title Section, was chairman of the open house committee which included Bob Brewer, Chief Supervisor of the File Section, and Bob Doetsch, Chief

Supervisor of the Supply Section.

The committee stated that all visitors were much impressed with the fact that employees of the Division continued to work during the tours, saying that it gave a much more realistic impression of the Division operations. One tax assessor-collector brought his entire office force down from Dallas to witness the Division operations, and another flew in from Houston to attend the open house. It is estimated that over 1,000 people visited the new building during the five and one-half hours of the open house.

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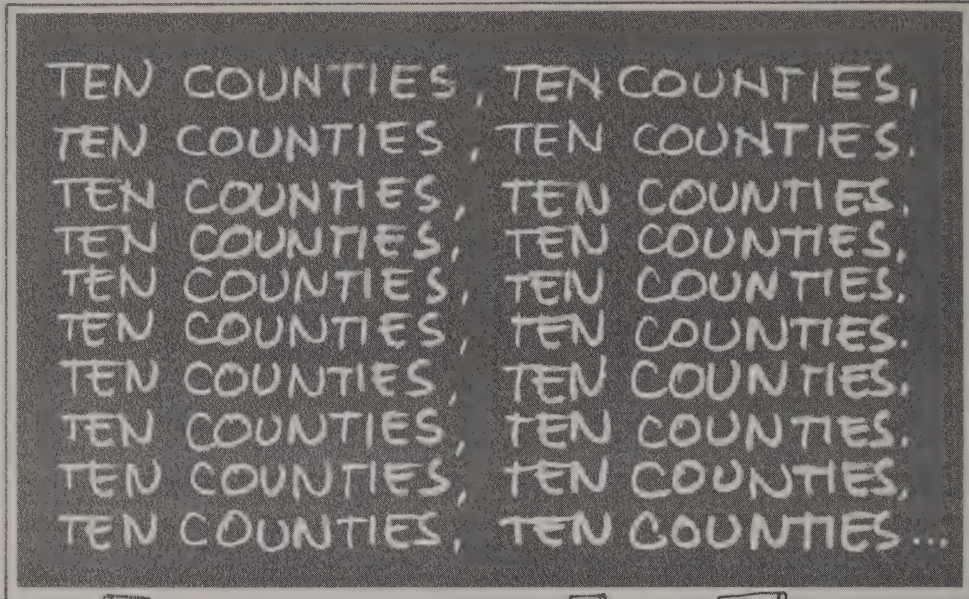
# Center Striper

E.D. Parmer, Assistant District Engineer
District 20

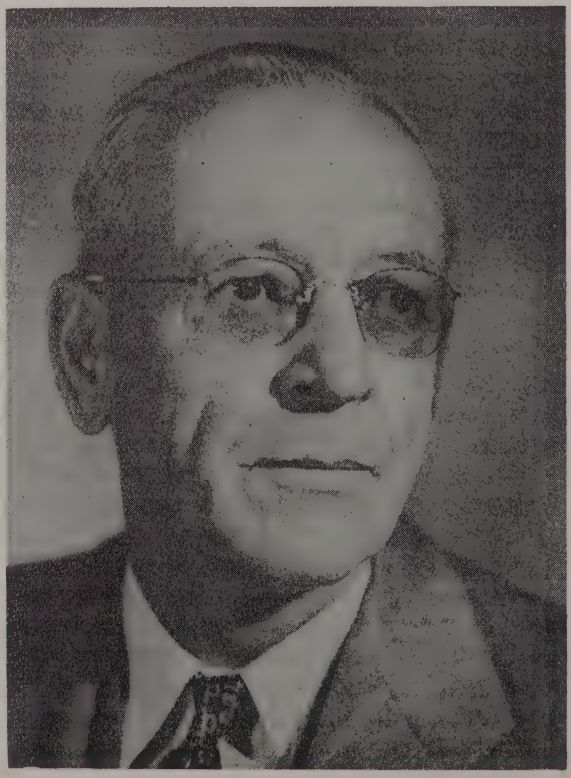
The new system of marking Texas highways calls for a dash center stripe with 15-foot dashes and 25-foot gaps. However, District 20's new Wald center stripe machine seemed to have a policy of its own when we began using it. We had a great deal of difficulty in controlling the length of the stripes. The trouble seemed to be in the air brushes. Sometimes they would cut off at the proper time and at other times they would not.

O. A. Keith, our Senior Equipment Supervisor, worked out what we believe is a solution which may be helpful to other districts that might encounter such a problem. Keith found that paint was working up around the needle valve to the packing and congealing, thus forming a brake action on the needle valve, making it impossible for the needle valve to drop back into the seat. This was remedied by removing the spring and adding a stronger spring. The spring that was removed from the chamber was an eleven-pound at 7/16-inch compression and a twenty-pound spring at 7/16-inch compression was installed. By making this change, the trouble was eliminated.

"We have done approximately 150 miles of striping since," Keith says, "and have not encountered any more trouble of this type."




Just so District Engineer T.O. Foster doesn't get his maintenance allotment cut because TEXAS HIGHWAYS gave him only nine counties last month in "The Districts Pass in Review," on his request we have reinstated his tenth county and hope his budget will not be short this year. And incidentally, this is how he looks without the staple.



. . . The last week in August we completed an automobile drive in a generally southwesterly direction from Boston to Shreveport and west to Eastland. On our entire trip we saw less trash on the highways than we saw during our first hour's drive in Texas—to say nothing of the rest of our Texas trip homeward.

In some of the New England states it is a $25 or $50 fine to throw trash on the highways and the public obeys that law almost perfectly, as far as we could judge by the clean highways.

Couldn't something be done to educate and force the public to keep our highways free of trash so that we taxpayers won't have to bear the expense of having the roadways cleaned? We could have told we were in Texas by the number of beer cans and whiskey bottles that littered the roadsides. Isn't that a sad reflection on the people of Texas and our officers?

We were proud of our good highways as we entered the state, but it is shameful that they are so strewn with trash. We're poor housekeepers!

Mrs. V. T. Seaberry
Eastland, Texas

. . . Please tell me if I (the renter) or the owner of this land will have to pay for the bulldozing if I want to put a small distance of the road further away from being in my door. It is so close it interferes with my privacy and liberty—it runs by the yard gate and it would be better road too further down as the soil is tight and would in no way interrupt us and be better for traveling public. Just a few trees and brush a small amount, keep it now from being traveled. My sons always come down that way with the tractors from work. It could be widened. Every time the road is graded here by the gate it gets deeper and holds water enough to stall the cars and drown them out—gets impassable at times—keeps the water from going into my well too. I just have a pension and am not able to pay the bull-dozing.

Could I be allowed to put a GO SLOW sign on the road by my house, they pass between the house (close to it) and a shop and my chickens and other things and sometimes children are sometimes nearly run over. Or a slow down sign would it be legal?

Signed

. . . We were especially impressed with the out-of-the-way service by the Highway Department. You have very good highways. It was a pleasure to pass through your state. Keep up the good work. . .

L. L. Vaneseau
Tucson, Arizona

. . . At a roadside park about two miles east of - - - we gathered up over 200 beer cans—evidently a local problem. . .

Burbank, California

. . . Not enough distance and direction signs at intersections and city edges. . .

Somerton, Arizona

. . . In some parks people don't keep it clean. Put up some signs "This park belongs to you. It's free. Keep it clean."

Henry Block
Preemption, Illinois

. . . Signposts showing the route numbers and direction to cities could be better, especially to the big cities. It is better to have a sign say "Austin 70 miles" than "Podunk 5 miles."

Evanston, Illinois

. . . We were impressed with the ability of your information bureau attendant. He even knew road conditions. We enjoyed driving on your fine roads. . .

F. F. Smith
Denver, Colorado

# IN MEMORIAM

Former Assistant State Highway Engineer, Tom. H. Webb, died on October 24, 1955, after a long illness.

His career with the Highway Department began on September 15, 1919, as Materials and Tests Engineer, and in 1927 he was appointed Assistant State Highway Engineer, serving in that capacity until retiring in 1951. He was born March 8, 1875, in DeWitt County, and graduated from Washington and Lee with a degree in civil engineering in 1897.

The Highway Commission in its October meeting passed a resolution paying tribute to him for the 32 years of faithful and efficient service he had rendered the Department.